

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): An integrated circuit for protocol control to be incorporated into an apparatus capable of handling digital money defined as a symbol of electronic currency, said integrated circuit being configured by integrating, on one chip, a storage section for storing a plurality of control program programs, one prepared for each of a plurality of protocols for a plurality of kinds of digital money different in mode from each other; a processing section for controlling the handling of said plurality of kinds of digital money, different in mode, in the apparatus by executing one control program corresponding to a mode of digital money that is to be handled in the apparatus into which said integrated circuit is to be incorporated, which one control program is assigned from said plurality of control program programs stored in said storage section; and an interface circuit connected to an external circuit including at least one of an external processing section and an external storage section to fulfill an interface function between said external circuit and said processing section.

Claim 2 (original): An integrated circuit for protocol control as defined in claim 1, wherein a peripheral control circuit, which fulfills a control function related to processing of digital money, is additionally integrated on said chip.

Claim 3 (original): An integrated circuit for protocol control as defined in claim 2, wherein said peripheral control circuit includes a medium control circuit which operates under control of said processing section and said control program to control a portable type medium storing digital money.

Claim 4 (original): An integrated circuit for protocol control as defined in claim 2, wherein said peripheral control circuit includes a communication control circuit which operates under control of said processing section and said control program to control a communication with an external circuit.

Claim 5 (original): An integrated circuit for protocol control as defined in claim 2, wherein said peripheral control circuit includes a display control circuit which operates under control of said processing section and said control program to control an external display unit.

Claim 6 (original): An integrated circuit for protocol control as defined in claim 2, wherein said peripheral control circuit includes an input control circuit which operates under control of said processing section and said control program to perform input processing of a signal from an external input unit.

Claim 7 (currently amended): An integrated circuit for protocol control as defined in claim 1, wherein a logical cutoff is made between said storage section and an external connecting

terminal of said integrated circuit, and said control program is stored in said storage section at the time of production of said integrated circuit.

Claim 8 (original): An integrated circuit for protocol control as defined in claim 1, further containing identification means for judging whether or not a program storing external storage section is connected through said interface circuit as said external circuit, wherein, when said identification means judges that said program storing external storage section is in connection, said processing section executes a program stored in said program storing external storage section.

Claim 9 (original): An integrated circuit for protocol control as defined in claim 8, wherein said identification means reads one or more logical addresses allocated to connection with said program storing external storage section, and makes a judgment to connection or non-connection with said program storing external storage section by comparing a predetermined value with a value obtained as a reading result.

Claim 10 (currently amended): An integrated circuit for protocol control as defined in claim 2, wherein said control program including includes:
one or more device control programs for controlling one of said external circuit connected to said interface circuit and said peripheral control circuit as a device;

a plurality of protocol control programs for controlling said device control program in relation to each of said plurality of kinds of digital money different in mode; and an application program for controlling said device control program and said protocol control programs.

Claim 11 (currently amended): An integrated circuit for protocol control as defined in claim 10, wherein, when receiving a control telegraphic statement including a digital money classification field specifying one of said plurality of kinds of digital money different in mode and a transaction classification field specifying a transaction classification common to said plurality of kinds of digital money different in mode, said application program conducts a transaction, specified by said transaction classification field, through the use of said protocol control program corresponding to the kinds of digital money specified by said digital money classification field.

Claim 12 (original): An integrated circuit for protocol control as defined in claim 11, wherein, when receiving said control telegraphic statement including a device classification field specifying said device control program and an instruction field describing a control instruction to said device control program, said application program informs said device control program, specified by said device classification field, of an instruction described in said instruction field, and makes said device control program execute said instruction, and further, transmits a response

to said instruction from said device control program as a response telegraphic statement to the instruction issuer.

Claim 13 (original): An integrated circuit for protocol control as defined in claim 12, wherein, in said control telegraphic statement, said digital money classification field and said device classification field are placed in common in the same field, while specification data for when said field is used as said digital money classification field and specification data for when said field is employed as said device classification field are mutually exclusive values.

Claim 14 (original): An integrated circuit for protocol control as defined in claim 13, wherein, in said control telegraphic statement, said transaction classification field and said instruction field are placed in common in the same field.

Claim 15 (original): An integrated circuit for protocol control as defined in claim 10, wherein said control program includes said device control program, said protocol control program and said application program as modules, and further includes a path control program for offering an interface function for an interconnection between these modules, while a peculiar module identifier is given to each of said modules so that said path control program makes the interconnections between said modules by using said module identifier of the connection-requesting module and said module identifier of the connection-accepting module as parameters.

Claim 16 (original): An integrated circuit for protocol control as defined in claim 10, wherein said peripheral control circuit includes a communication control circuit for controlling a communication with an external unit, and said control program includes said device control program, said protocol control program and said application program as modules, and further includes a path control program for offering an interface function for an interconnection between said modules and a communication control program for controlling said communication control circuit, while, when the connection-requesting module pertains to said external unit, said path control program establishes a connection between the connection-requesting module in said integrated circuit and the connection-accepting module in said external unit through said communication control circuit controlled by said communication control program.

Claim 17 (original): An integrated circuit for protocol control as defined in claim 16, wherein a peculiar module identifier is given to each of said modules pertaining to said integrated circuit and to each of modules pertaining to said external unit, and a peculiar path identifier is given to said integrated circuit and to said external unit, while said path control program makes an interconnection between said modules by using said module identifier of the connection-requesting module, said module identifier of the connection-accepting module and said path identifiers as parameters.

Claim 18 (original): An integrated circuit for protocol control as defined in claim 17, further comprising a table for retaining a correspondence between said module identifier and said

path identifier indicative of one of said integrated circuit and said external unit to which said module having the same module identifier given pertains, wherein said path control program retrieves said table on the basis of said module identifier of the connection-accepting module to obtain said path identifier corresponding to said module identifier of the connection-accepting module, and, when the obtained path identifier coincides with said path identifier of said integrated circuit, makes a connection between the connection-requesting module and the connection-accepting module in said integrated circuit, while, when the obtained path identifier does not coincide with the path identifier of said integrated circuit, judges that the connection-accepting module pertains to said external unit and makes a connection between the connection-requesting module in said integrated circuit and the connection-accepting module in said external unit through said communication control circuit.

Claim 19 (original): An integrated circuit for protocol control as defined in claim 18, wherein said correspondence retained in said table is made to accept its setting and change through a telegraphic statement received by said communication control circuit.

Claim 20 (original): An integrated circuit for protocol control as defined in claim 18, wherein said table is stored in said external storage section serving as said external circuit connected through said interface circuit.

Claim 21 (original): An integrated circuit for protocol control as defined in claim 16, wherein said external unit is a processing unit having the same function as that of said integrated circuit.

Claim 22 (original): An integrated circuit for protocol control as defined in claim 17, wherein said external unit is a processing unit having the same function as that of said integrated circuit.

Claim 23 (original): An integrated circuit for protocol control as defined in claim 18, wherein said external unit is a processing unit having the same function as that of said integrated circuit.

Claim 24 (original): An integrated circuit for protocol control as defined in claim 19, wherein said external unit is a processing unit having the same function as that of said integrated circuit.

Claim 25 (original): An integrated circuit for protocol control as defined in claim 20, wherein said external unit is a processing unit having the same function as that of said integrated circuit.

Claim 26 (original): An integrated circuit for protocol control as defined in claim 16, wherein said external unit is another integrated circuit having the same configuration as that of said integrated circuit.

Claim 27 (original): An integrated circuit for protocol control as defined in claim 17, wherein said external unit is another integrated circuit having the same configuration as that of said integrated circuit.

Claim 28 (original): An integrated circuit for protocol control as defined in claim 18, wherein said external unit is another integrated circuit having the same configuration as that of said integrated circuit.

Claim 29 (original): An integrated circuit for protocol control as defined in claim 19, wherein said external unit is another integrated circuit having the same configuration as that of said integrated circuit.

Claim 30 (original): An integrated circuit for protocol control as defined in claim 20, wherein said external unit is another integrated circuit having the same configuration as that of said integrated circuit.

Claim 31 (original): An integrated circuit for protocol control as defined in claim 16, wherein said external unit is a processing unit having an application program for issuing a connection request to said path control program in said integrated circuit for a connection with said module pertaining to said integrated circuit, while, when receiving said connection request from said processing unit through said communication control circuit controlled by said communication control program, said path control program makes a connection between the corresponding module in said integrated circuit and said processing unit.

Claim 32 (original): An integrated circuit for protocol control as defined in claim 17, wherein said external unit is a processing unit having an application program for issuing a connection request to said path control program in said integrated circuit for a connection with said module pertaining to said integrated circuit, while, when receiving said connection request from said processing unit through said communication control circuit controlled by said communication control program, said path control program makes a connection between the corresponding module in said integrated circuit and said processing unit.

Claim 33 (original): An integrated circuit for protocol control as defined in claim 18, wherein said external unit is a processing unit having an application program for issuing a connection request to said path control program in said integrated circuit for a connection with said module pertaining to said integrated circuit, while, when receiving said connection request from said processing unit through said communication control circuit controlled by said

communication control program, said path control program makes a connection between the corresponding module in said integrated circuit and said processing unit.

Claim 34 (original): An integrated circuit for protocol control as defined in claim 19, wherein said external unit is a processing unit having an application program for issuing a connection request to said path control program in said integrated circuit for a connection with said module pertaining to said integrated circuit, while, when receiving said connection request from said processing unit through said communication control circuit controlled by said communication control program, said path control program makes a connection between the corresponding module in said integrated circuit and said processing unit.

Claim 36 (currently amended): An integrated circuit for protocol control to be incorporated into an apparatus which conducts data interchange through communication with a portable type medium, said integrated circuit being configured by integrating, on one chip, a storage section for storing a plurality of control program programs, one prepared for each of a plurality of protocols for a plurality of data communications different in mode, a processing section for controlling said plurality of data communications, different in mode, in the apparatus by executing one control program corresponding to a mode of data communication performed in the apparatus into which said integrated circuit is to be incorporated, wherein said one control program is assigned from the plurality of control program programs stored in the storage section, and an interface circuit connected to an external circuit including at least one of an external

processing section and an external storage section to fulfill an interface function between said external circuit and said processing section.